

WE CLAIM:

1. A colloidal suspension of a LEV structure type crystalline molecular sieve.
- 5 2. A suspension as claimed in claim 1, wherein the mean size of the LEV particles is within the range of from 5 to 1000 nm.
3. A suspension as claimed in claim 2, wherein the range is from 10 to 300 nm.
- 10 4. A suspension as claimed in claim 3, wherein the range is from 20 to 100 nm.
5. A suspension as claimed in claim 1, wherein the mean size of the LEV particles is at most 100 nm.
- 15 6. A method for preparing a colloidal suspension of a LEV structure type crystalline molecular sieve, which comprises synthesizing a LEV structure type crystalline molecular sieve by treatment of a synthesis mixture containing the elements necessary to form a LEV crystalline molecular sieve, separating the resulting LEV crystalline molecular sieve product from the synthesis mixture, washing the product, and recovering the resulting wash liquid.
- 20 7. A method as claimed in claim 6, wherein the recovered wash liquid is the liquid resulting from the second or subsequent washing.
- 25 8. The product of the method of claim 6.

9. A process for the manufacture of a crystalline molecular sieve, which process comprises treating a synthesis mixture comprising elements necessary to form the molecular sieve and colloidal LEV crystalline molecular sieve seeds for a time and at a temperature appropriate to form the desired molecular sieve.
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10. A process as claimed in claim 9, wherein the desired molecular sieve is of the LEV structure type.
11. A process as claimed in claim 10, wherein the desired molecular sieve is
- 10 selected from the group consisting of Levyne, ZK-20, NU-3 and ZSM-45.
12. A process for the manufacture of a crystalline molecular sieve, which comprises treating a synthesis mixture comprising elements necessary to form a molecular sieve of a first structure type, other than LEV, and colloidal LEV
- 15 molecular sieve seed crystals for a time sufficient and at a temperature appropriate to form the molecular sieve of the first structure type.
13. The invention as claimed in claim 12, in which colloidal LEV structure type seeds are used in the manufacture of a crystalline molecular sieve selected
- 20 from the group consisting of the MFS, CHA, OFF, MOR, FER, MAZ, EUO and ERI/OFF, structure types.
14. A process as claimed in claim 13, wherein the crystalline molecular sieve manufactured is selected from the group consisting of chabasite, a phosphorus-
- 25 containing molecular sieve of the CHA structure type, mordenite, ferrierite, Linde Zeolite T, mazzite, offretite, ZSM-57, ZSM-38, and ZSM-50.
15. In the synthesis of a crystalline molecular sieve other than of LEV structure type by thermal treatment of a synthesis mixture suitable for the

manufacture of that molecular sieve, the improvement which comprises the use of colloidal LEV seed crystals to control the morphology of the product.

16. The synthesis as claimed in claim 15, wherein colloidal LEV seeds are
5 used to form Linde Zeolite T of disk-like morphology.

17. In the synthesis of a crystalline molecular sieve, the improvement which
comprises the use of colloidal LEV seed crystals to control a characteristic of the
resulting crystalline molecular sieve.
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18. The synthesis as claimed in claim 17, wherein the characteristic is at least
one member selected from the purity, the particle size, and the particle size
distribution.

15 19. In the synthesis of a crystalline molecular sieve in the substantial absence
of an organic structure-directing agent, the improvement which comprises the use
of colloidal LEV seed crystals.

20. In the synthesis of a crystalline molecular sieve, the improvement
20 comprising the use of colloidal LEV seed crystals to accelerate the formation of
the product.

21. A process for hydrocarbon conversion, separation, or adsorption, which is
carried out in the presence of a crystalline molecular sieve obtained by the
25 treatment of a synthesis mixture comprising colloidal LEV seed crystals and
elements necessary to form the molecular sieve for a time and at a temperature
appropriate for the formation of the said crystalline molecular sieve.

22. A process of oxygenate conversion which is carried out in the presence of a crystalline molecular sieve obtained by the treatment of a synthesis mixture comprising colloidal LEV seed crystals and elements necessary to form the molecular sieve for a time and at a temperature appropriate for the
- 5 formation of the said crystalline molecular sieve.